[protocol] first address and a [terminal] second address of each terminal, and an exchange or switch which accommodates each terminal and the server, [said] the method comprising:

[a first step in which an originating terminal sends a terminal address interrogation request to the server if the terminal address of another party's terminal is unknown at the time of communication;

a second step in which the server, upon receiving the terminal address interrogation request from the terminal, refers to the address table and searches for a terminal address corresponding to a protocol address contained in said interrogation request;

a third step in which, if a terminal address corresponding to said protocol address is obtained from the address table, the server notifies the terminal of this terminal address;]

a [fourth] first step in which[,if the terminal address is not obtained from the address table,] the server transfers [the] a terminal address interrogation request containing [said] a [protocol] first address to [all] a plurality of terminals via the exchange or switch;

a [fifth] second step in which, when each terminal receives the terminal address interrogation request transferred from the server, the terminal determines

whether the [protocol] first address contained in [said] the interrogation request agrees with its own [protocol] first address and notifies the server of an answer including its own [terminal] second address [if] when agreement is achieved; and

a [sixth] third step in which the server [notifies the originating terminal of the terminal address of which it has been notified.] receives the answer including the second address corresponding to the first address from one of the plurality of terminals and registers in the server a corresponding relationship between the first address and the second address which have been handled by the second step.

2. (Amended) The method according to claim 1, wherein [said] the [fourth] first step includes:

a step in which the exchange or switch connects the server with [all] a plurality of terminals by PVCs (permanent virtual channels) [having identical values]; and

a step in which, when a terminal address interrogation request having [said identical] a predetermined value for a PVC has entered from the server, the exchange or switch performs cell copying, whereby [said] the terminal address

interrogation request cell is transferred to [all] the plurality of terminals.

3. (Amended) The method according to claim 1, wherein [said] the [fourth] first step includes:

a step in which the exchange or switch connects the server with [all] a plurality of terminals by PVCs (permanent virtual channels) [having identical values] and divides [all] the plurality of terminals into a plurality of groups;

a step in which, when a terminal address interrogation request having [said identical] a predetermined value for a PVC has entered from the server, the exchange or switch performs cell copying, whereby [said] the terminal address interrogation request cell is transferred to all terminals in a first group;

a step in which the server performs monitoring to determine whether a prescribed terminal has answered with a [terminal] second address within a set period of time;

a step in which the server sends the interrogation request cell to [all] the plurality of terminals of the next group if no terminal answers with a [terminal] second address within the set period of time; and

a step in which the server transfers the ~~terminal~~ address interrogation request ~~while~~ successively changing the group until a ~~prescribed~~ terminal answers with a [terminal] ~~second address.~~

4. (Amended) The method according to claim 1, further comprising a [seventh] fourth step in which, when the server receives the answer [of the] including [terminal] the second address corresponding to the first address from the one of the plurality of terminals, the server [newly stores] registers the corresponding relationship between [said] the [protocol] first address and the [terminal] second address, of which it has been notified, in [the address table] the server.

5. (Amended) The method according to claim 1, further comprising an [eighth] fifth step in which the server [stores] registers, in the [address table] server, the corresponding relationship between the [protocol] first address [of the originating terminal] and the [terminal] second address which are contained in the [terminal address interrogation request] answer received from [said originating] the one of the plurality of terminals.

6. (Amended) The method according to claim 1, further comprising:

a [seventh] fourth step in which, when the server receives the answer [of the terminal] including the second address from the one of the plurality of [terminal] terminals, the server deletes a corresponding relationship, referred to least recently, between a [protocol] first address and [terminal] second address if the server can not accommodate a corresponding relationship between the first address and second address [address memory is full]; and

[an eighth] a fifth step in which the server [newly stores] registers the corresponding relationship between [said] the [protocol] first address and the [terminal] second address, of which it has been notified, in the [address table] server.

Please cancel claim 7 without prejudice.

8. (Amended) A communication system equipped with a plurality of terminals, a server [having an address table] memory for [storing] registering a corresponding relationship between a [protocol] first address and [terminal] second address of each terminal, and an exchange

or switch which accommodates each terminal and the server, wherein each of [said] the terminals comprises:

means for sending a terminal address interrogation request to the server if the [terminal] second address of another party's terminal is unknown at the time of communication;

[communication means for communicating with the other party's terminal via the exchange using a terminal address of which it has been notified by the server in response to the interrogation request;] and

[Terminal] terminal address answering means for answering the server with its own [terminal] second address [if] when a [protocol] first address contained in a terminal address interrogation request transferred from the server agrees with its own [protocol] first address; and

[said] the server comprises:

[means for referring to the address table and searching for a terminal address corresponding to a protocol address contained in a terminal address interrogation request from a terminal;]

means [which, if a terminal address corresponding to said protocol address has not been registered in the address table, is] for transferring the terminal address interrogation request containing [said] the [protocol]

first address to [all] a plurality of terminals via the exchange or switch; and

[means for notifying the terminal which has issued the interrogation request of a terminal address found from the address table or of a terminal address obtained by an answer from a terminal.] means for registering in the server a corresponding relationship between the first address, and the second address included in the answer which has been answered from one of the plurality of terminals in response to the terminal address interrogation request transferred from the server.

9. (Amended) The communication system according to claim 8, wherein [said] the exchange or switch comprises:

means for connecting the server with [all] a plurality of terminals by PVCs (permanent virtual channels) [having identical values]; and

means which, when a terminal address interrogation request having [said identical] a predetermined value for a PVC has entered from the server, is for performing cell copying and transferring [said] the interrogation request cell to [all] a plurality of terminals.

10. The communication system according to claim 8, wherein [said] the server has registration means which, when the server receives the answer of the [terminal] second address from [a prescribed] the one of the plurality of terminals [terminal], is for [newly storing] registering the corresponding relationship between a [protocol] first address and the [terminal] second address, of which it has been notified, in the [address table] server.

11. (Amended) The communication system according to claim 10, wherein when the server cannot register a corresponding relationship between the first address, and second address which is [receives] received [the answer of the terminal address] from the prescribed terminal, [said] the registration means deletes a corresponding relationship, referred to least recently, between a [protocol] first address and [terminal] second address [if the address memory is full].

12. (Amended) A server in a communication system equipped with a plurality of terminals[, the server for managing a corresponding relationship between a protocol address and terminal address of each terminal, and an

exchange or switch which accommodates each terminal and the server], [said] the server comprising:

[an address table for storing the corresponding relationship between a protocol address and terminal address of each of the plurality of terminals;

search means for referring to said address table and searching for a terminal address corresponding to a protocol address contained in a terminal address interrogation request from a terminal; and]

interrogation means [which, if a terminal address corresponding to the protocol address has not been registered in the address table, is] for interrogating [all] a plurality of terminals, via an exchange or switch, for the [terminal] second address corresponding to this [protocol] first address;

[wherein in response to receipt of a terminal address interrogation request from an originating terminal, said search means refers to said address table to obtain the terminal address conforming to the protocol address contained in this terminal address interrogation request and, if this terminal address has not been registered, said interrogation means interrogates the terminals for terminal address.]

means for receiving an answer including the second address corresponding to the first address from one of the plurality of terminals in response to the terminal address interrogation request; and

registration means for registering a corresponding relationship between the first address and the second address, of which it has been notified, in a memory.

Please cancel claim 13 without prejudice.

14. (Amended) The server according to claim [13] 12, wherein when the server receives the answer including [of] the [terminal] second address from the [prescribed terminal] one of the plurality of terminals, [said] the registration means deletes a corresponding relationship, referred to least recently, if [said] the [address table] server can not accommodate a corresponding relationship between the first address and second address [is full], and registers the corresponding relationship between the [protocol] first address and the [terminal] second address, of which it has been notified, in [said address table] the server.

15. (Amended) The server according to claim 12, wherein [said] the terminal address interrogation means

divides [all] a plurality of terminals into a plurality of groups, interrogates all terminals of a first group for a [terminal] second address and, if notification of an answer [of] including [a terminal] the second address is not received within a set period of time, interrogates all terminals of the next group for a [terminal] second address.

Please cancel claims 16-39 without prejudice.

Please add the following claims:

40. In a network system having a server, the method comprising the steps of:

transferring by the server a terminal address interrogation request including a first address to a plurality of terminals;

receiving by the server an answer including a second address corresponding to the first address from one of the plurality of terminals; and

registering in the server a corresponding relationship between the first address and the second address.

41. The method according to claim 40, wherein the corresponding relationship between the first address and

the second address is registered in a vacancy which has been formed by deleting an entry having a corresponding relationship between a first address and a second address.

42. The method according to claim 41, wherein the vacancy is formed by deleting the entry having the oldest reference time.

43. The method according to claim 40, wherein the system includes a switch or exchange and wherein the transferring step includes:

a step in which the switch or exchange connects the server with a plurality of terminals by PVCs (permanent virtual channels);

a step in which, when the terminal address interrogation request in the form of a cell having a predetermined virtual channel identifier is entered from the server, the switch or exchange appends tag information indicating a terminal group to the cell, performs cell copying based on the tag information indicating the terminal group, and transfers the cell to terminals of the terminal group.

44. The method according to claim 40, wherein the system includes a switch or exchange and wherein the transferring step includes:

a step in which the switch or exchange connects the server with a plurality of terminals by PVCs (permanent virtual channels) and divides the plurality of terminals into a plurality of groups;

a step in which, when the terminal address interrogation request in the form of a cell is entered from the server, the switch or exchange performs cell copying, whereby the terminal address interrogation request cell is transferred in a first group;

a step in which the server performs monitoring to determine whether a prescribed terminal has answered with its own address within a set period of time;

a step in which the server sends the terminal address interrogation request cell to all terminals of the next group when no terminal answers with its own address with the set period of time; and

a step in which the server transfers the terminal address interrogation request while successively changing the group until a prescribed terminal answers with its own address.

45. The method according to the claim 40, further comprising a step in which, when the server receives the answer including the second address from the one of the plurality of terminals, the server stores the corresponding relationship between the first address and the second address in place of a memory in the server designated by an index value which is calculated based on a value of the first address or the second address.

46. The method, according to claim 40, further comprising a step in which the server periodically receives a terminal address interrogation request including a second address from each terminal of the plurality of terminals, whereby the corresponding relationship between the first address of its own terminal and the second address in kept in the server.

47. In a network system having a server, the method comprising the steps of:

receiving by the server an answer including a second address corresponding to a first address from one of a plurality of terminals;

deleting an entry having a corresponding relationship between a first address and a second address from the

server to form a vacancy when the sever cannot register the corresponding relationship between the first address and the second address obtained from the receiving step; and

registering in a vacancy of the server a corresponding relationship between the first address and the second address obtained from the receiving step.

48. The method according to claim 47, wherein the vacancy is formed by deleting the entry having the oldest reference time.

49. An address resolution system equipped with a plurality of terminals, a switch or exchange which accommodates each terminal of a plurality of terminals and a server, wherein each terminal of the plurality of terminals comprises:

means for answering the server with its own second address when a terminal address interrogation request including a first address transferred from the server agrees with its own first address; and the server comprises:

means for transferring the terminal address interrogation request including the first address to the plurality of terminals; and

receiving means for receiving an answer including a second address corresponding to the first address from one of the plurality of terminals;

means for registering in the server a corresponding relationship between the first address and the second address which have been handled by the receiving means.

50. The address resolution system according to claim 49, wherein the switch or exchange comprises:

means for connecting the server with a plurality of terminals by PVCs (permanent virtual channels); and

means which, when a terminal address interrogation request cell having a predetermined value for a PVC is entered from the server, is for performing cell copying and transferring of the interrogation request cell to the plurality of terminals.

51. The address resolution system according to claim 49, wherein the server has registration means which when the server receives the answer including the second address corresponding to the first address from one of the plurality of terminals, is for registering a corresponding relationship between the first address and the second address in a place designated by an index value which is

calculated based on a value of the first address or the second address.

52. The address resolution system according to claim 49, wherein when the server receives the answer including the second address corresponding to the first address from the one of the plurality of terminals, the registration means deletes an entry having a corresponding relationship between a first address and a second address from the server when the server cannot accommodate an entry having a corresponding relationship between the first address and the second address which are included in the answer which has been received from the one of the plurality of terminals.

53. A server comprising:

means for transferring a terminal address interrogation request including a first address to a plurality of terminals;

means for receiving a notification of an answer including a second address corresponding to the first address from one of the plurality of terminals in response to the terminal address interrogation request; and

means for registering a corresponding relationship between the first address and the second address in a place designated by an index value which is calculated based on a value of the first address or the second address, in the server.

54. The server according to claim 53, wherein when the server receives the answer including the second address corresponding to the first address from the one of the plurality of terminals, the registration means deletes a corresponding relationship, referred to least recently, when the server can not accommodate a corresponding between the first address and second address, and registers the corresponding relationship between the first address and the second address, of which it has been notified, in the server.

55. The server according to claim 53, wherein the terminal address interrogation means divides terminals into a plurality of groups, interrogates terminals of a first group for a second address and, when a notification of an answer including a second address is not received within a set period of time, interrogates the terminals of the next group for a second address.

56. An apparatus comprising:

a receiver for receiving a terminal address interrogation request including a first address, and notifying a processor of a notification that the terminal address interrogation request has been received;

the processor for notifying a transmitter of a transmission request for transferring the terminal address interrogation request to a switch or exchange, based on the notification sent from the receiver; and

the transmitter for transmitting the terminal address interrogation request with a prescribed destination address for multicasting, based on the transmission request sent from the processor;

wherein, when the processor obtains the second address corresponding to the first address included in an answer from one of a plurality of terminals, the processor registers a corresponding relationship between the first address and second address in the memory.

REMARKS

This is a reissue application.

With regard to establishing the right of the Assignee to prosecute the present application, the Patent Office